

REMARKS

Applicant's attorney thanks the Examiner for his comments, and the thoughtful analysis of the prior art. Independent Claim 18 has been amended to indicate that the laminated structure has a 180° static peel strength (time to fail) of at least about six hours and a dynamic peel strength after 85% stretch of at least about 2000 grams per 2-inch width. Support is found in Table 1, page 31 and the surrounding paragraphs, and Table 2, page 33 of the specification. The inventive Composition 1 had a dynamic peel strength after 85% stretch of 2300 grams per 2-inch width. Table 1, and the paragraphs before and after Table 1 indicate that this dynamic peel strength existed before and after an 85% stretch of the laminate. The inventive Compositions 1 and 2 had a 180° static peel strength of 6 hours or more, as shown in Tables 1 and 2.

As shown in Tables 1 and 2, the inventive Compositions 1 and 2 provide the claimed laminate with a unique combination of high dynamic peel strength (before and after an 85% stretch) and high static peel strength, compared to the other adhesives tested. The other adhesives tested included a) a polypropylene blend of 90% by weight atactic polypropylene and 10% by weight isotactic polypropylene without an elastomeric base polymer, b) a commercial elastomer-based adhesive, H2525A, which does not contain the claimed polymer combination, and c) an amorphous poly-alpha olefin based adhesive, RT2730, which does not contain the claimed polymer combination. In other words, the claimed adhesive combination of atactic polymer, isotactic polymer and elastomer provides the laminate with a unique combination of superior properties which cannot be achieved using an adhesive which contains less than all three ingredients.

a) Claim Rejection Based on Double Patenting

The rejection of Claims 18-35 and 44-65 based on obviousness-type double patenting over Claims 1-12 of U.S. Patent 6,872,784 in view of WO 02/053668 is respectfully traversed.

The Examiner erroneously states that Claims 1-12 of the '784 patent disclose the instantly claimed adhesive. To the contrary, the claims of the '784 patent disclose only two components forming an adhesive, namely an elastomer and a crystalline polymer. Applicant's adhesive requires three specific components as explained above.

The Examiner erroneously implies that Claims 1-12 of the '784 patent teach the use of the claimed adhesive in an absorbent article. Claims 1-12 convey no such teaching. The Examiner is not permitted to apply the '784 specification as prior art.

WO 02/053668 is cited as disclosing the structure of the claimed laminate. However, the adhesive disclosed in WO 02/053668 contains an atactic polymer and an isotactic polymer, i.e. less than all three of the components required by Applicant's claims. Such an adhesive would not be expected to yield the unique combination of high static peel strength and high dynamic peel strength after 85% stretch, as recited in Applicant's Claim 18. Instead, the disclosed adhesive is analogous to the polypropylene blend referred to in Applicant's Table 1, which exhibited lower static peel strength and lower dynamic peel strength (even without stretching). Accordingly, WO 02/053668 does not disclose the structural limitations of the laminate, as defined by the unique combination of laminate properties.

For these reasons, the rejection based on double patenting should be withdrawn

b) Claim Rejection Based on 35 U.S.C. § 103(a)

The rejection of Claims 18-35 and 44-60 under U.S.C. § 103(a) as obvious over WO 02/053668 in view of U.S. Patent 4,857,594 is respectfully traversed. Applicant notes with appreciation that Claims 61-65 were not rejected under this statute.

WO 02/053668 is cited as disclosing a laminate formed using an adhesive which contains an atactic polymer and an isotactic polymer. As explained above, the disclosed adhesive contains less than all of the three ingredients required by Applicant's Claim 18. As further explained above, with respect to Applicant's Examples, the disclosed adhesive is analogous to one which failed to satisfy the unique combination of high static peel strength and high dynamic peel strength after 85% stretch, as required by Claim 18.

Furthermore, WO 02/053668 teaches away from adding an elastomer or other conventional components to the disclosed two-component adhesive composition. For instance, WO 02/053668 makes the following statement in the "Summary Of The Invention:"

The adhesive compositions of the invention generally perform better, and cost less, than conventional hot melt adhesives (p. 3 lines 4-5).

Yet, WO 02/053668 defines “conventional hot melt adhesive” as generally including an elastomer:

“Conventional hot melt adhesive” means a formulation that generally comprises several components. These components typically include one or more polymers to provide cohesive strength (e.g., aliphatic polyolefins such as poly (ethylene-co-propylene) copolymer; ethylene vinyl acetate copolymers; styrene-butadiene or styrene-isoprene block copolymers; etc.); a resin or analogous material (sometimes called a tackifier) to provide adhesive strength (e.g., hydrocarbons distilled from petroleum distillates; rosins and/or rosin esters; terpenes derived, for example, from wood or citrus, etc.); perhaps waxes, plasticizers or other materials to modify viscosity (i.e. flowability) (examples of such materials include, but are not limited to, mineral oil, polybutene, paraffin oils, ester oils, and the like); and/or other additives including, but not limited to, antioxidants or other stabilizers (p. 14 line 28 – p. 15 line 6).

Thus, from a perspective of persons skilled in the art, a fair reading of WO 02/053668 is that it is advantageous to exclude elastomers and other ingredients of conventional hot melt adhesives, from the disclosed inventive adhesive compositions.

U.S. Patent 4,857,954 discloses an adhesive composition that falls within the above-described class of “conventional hot melt adhesives.” The essential ingredients of the disclosed adhesive are 1) an amorphous poly-alpha olefin, 2) a selectively hydrogenated monoalkenyl arene/conjugated diene block copolymer of linear or radial configuration (i.e. an elastomer) and 3) a tackifier (Col. 1 lines 7-14). The Examiner alleges that it would have been obvious to take an ingredient from the ‘954 patent adhesive (namely, the elastomer) and add it to the two-component adhesive disclosed in WO 02/053668. However, as explained above, WO 02/053668 is directed to a specific adhesive having properties that are better than corresponding properties of conventional hot melt adhesives. A person skilled in the art would thus not be motivated to “improve” the adhesive of WO 02/053668 by combining it with an elastomer or other conventional

ingredients. WO 02/053668 teaches that the two-component adhesive is already better than conventional hot melt adhesives. Thus, WO 02/053668 would motivate persons skilled in the art to exclude elastomers and other ingredients of conventional hot melt adhesives.

For these reasons, the prior art does not suggest combining two (atactic and isotactic polymer) adhesive ingredients from the primary reference with a third (elastomer) ingredient from the secondary reference to produce an adhesive which yields the unique combination of high static peel strength and high dynamic peel strength after 85% stretch, required by Applicant's Claim 18.

Another approach to this analysis is apparent from Table 1 on p. 18 of Applicant's specification. The comparative "polypropylene blend" adhesive is analogous to the blend of isotactic and atactic polymers disclosed in WO 02/053668. The comparative APAO (amorphous poly-alpha olefin) based adhesive is somewhat analogous to the APAO-based adhesive described in U.S. Patent 4,857,954. WO 02/053668 teaches that the polypropylene blend (of atactic and isotactic polymers) is better than conventional hot melt adhesives, such as the adhesive disclosed in U.S. Patent 4,857,954. The data in Applicant's Table 1 tends to support this. However, Table 1 further illustrates that Applicant's adhesive ("Composition 1 ") yields a substantially better combination of static peel strength and dynamic peel strength than either of the other adhesives.

This is a situation where an adhesive "A" (disclosed in WO 02/053668) has intermediate performance, an adhesive "B" (disclosed in U.S. Patent 4,857,594) has lower performance, and the inventive adhesive "C" performs superior to the other two. It would not have been obvious to combine ingredients of an intermediate-performing adhesive with an ingredient from a lower-performing adhesive to arrive at an adhesive which is superior in all measured respects. Such superior results are completely surprising and unexpected, and contrary to every known human instinct.

For these reasons, the rejection under 35 U.S.C. § 103(a) should be withdrawn.

Serial No.: 10/655,717

Docket No.: 19,188

c) Conclusion

Applicant believes that the claims, as now presented, are in condition for allowance. If the Examiner detects any unresolved issues, then Applicant's attorney respectfully requests a telephone call from the Examiner, and a telephone interview.

Respectfully submitted,



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